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09/658,778	09/11/2000	Ghassan Semaan	453.02	4433

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CIENA CORPORATION LEGAL DEPARTMENT
PATENT MATERIALS ENCLOSED
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EXAMINER

ELALLAM, AHMED

ART UNIT

PAPER NUMBER

2662

DATE MAILED: 04/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/658,778

Applicant(s)

SEMAAN, GHASSAN

Examiner

AHMED ELALLAM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “**second circuit** configured to assign a protection mechanism corresponding to a SONET protection level to each logical frame” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

The drawings of Figure 5 are objected to under 37 CFR 1.83(a) because they fail to show “second optical card 518” as described in the specification. See page 17, line 12. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities:

On page 14, lines 14 and 15, the numeral character “401” has a typo error.

On page 17, line 21, the numeral character “508” has a typo error.

On page 19, line 8, the numeral character “510” has a typo error, it should be “508”

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 4 and 11 recite the limitation ^{that} "logical ring". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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4. Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al, US (6,501,758).

Regarding claim 1, Chen discloses a fiber ring (SONET ring) system in which a STS level signals, or combinations of STS level signals are used, the system facilitates effective and efficient communication of ATM and TDM traffic over the common fiber ring. The system, through a variety of configurations and modes of operation, provides flexibility in the distribution of bandwidth between ATM and TDM traffic. Column 4, lines 43-62, Column 6, lines 66-67 and column 7, lines 1-14. (Corresponding to claimed subdividing a portion of data frames comprising a SONET transmission into one or more logical frames, each logical frame having associated therewith a predetermined bandwidth capacity). Chen further discloses that virtual path automatic protection switching (VP APS) is used for STS/ATM traffic, and uni-directional path-switched ring protection is offered to STS/TDM traffic. And adjustment of the bandwidth allotted to either traffic type is accomplished provisioning the STS paths accordingly. See column 8, lines 24-39. (Corresponding to assigning a protection mechanism to each logical frame). Chen further discloses an automatic protection switching selector within a node in the fiber ring that chooses incoming signals from either working or protection channels depending on the configuration of the circuit and whether a fault has been detected. In a particular mode of operation, where ring 12 is configured as a bi-directional line-switched ring, automatic protection switching selector identify predetermined ATM -carrying channels and disables line switching protection for these pre-designated ATM -carrying channels. Column 12, lines 8-21. (Corresponding to

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monitoring the SONET ring transmission to determine protection mechanisms associated with each logical frame).

Regarding claim 2, Chen discloses STS level signals, or combinations of STS level signals are used, See column 4, lines 43-62, column 6, lines 66-67 and column 7, lines 1-14. (Corresponding to data frames comprise a plurality of STS level one frame).

Regarding claim 3, Chen discloses that virtual path automatic protection switching (VP APS) is used for STS/ATM traffic, and uni-directional path-switched ring protection is offered to STS/TDM traffic. See column 8, lines 24-39. (Corresponding to the protection mechanism comprise one of a layer1 SONET protection mechanism and a layer 2 protection mechanism).

Regarding claim 4, in which the limitation "logical ring" is understood to mean "logical frame" and with reference to Figure 1, Chen discloses that System 10 facilitates effective and efficient communication of ATM and TDM traffic over a common fiber ring. Through a variety of configurations and modes of operation, system 10 provides flexibility in the distribution of bandwidth between ATM and TDM traffic. For example, if one type of traffic dominates the ring, system 10 can be configured to focus the majority of its resources on communicating that type of traffic. In addition, by providing ATM layer processing functionality at at least some of nodes 14 on fiber ring 12, system 10 facilitates a high granularity in switching ATM information carried in STM signals. Column 2, lines 37-58. (Corresponding to limitation of claim 4).

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Regarding claims 5 and 6, Chen discloses that Fiber ring 12 may comprise, for example, a two-fiber ring configured in a uni-directional path-switched ring (UPSR) mode, or a bi-directional path-switched ring (BLSR) mode.

Regarding claim 7, with reference to Figure 1, Chen discloses that System 10 facilitates effective and efficient communication of ATM and TDM traffic over a common fiber ring. Through a variety of configurations and modes of operation, system 10 provides flexibility in the distribution of bandwidth between ATM and TDM traffic. For example, if one type of traffic dominates the ring, system 10 can be configured to focus the majority of its resources on communicating that type of traffic. In addition, by providing ATM layer processing functionality at at least some of nodes 14 on fiber ring 12, system 10 facilitates a high granularity in switching ATM information carried in STM signals. Column 2, lines 37-58. (Corresponding to Layer2 protection mechanism comprises at least one of: an Ethernet protection mechanism, an Asynchronous transport mode protection mechanism, or a time division multiplexing protection mechanism).

Regarding claims 8-14, claims 8-14 are apparatus claims and have substantially the same scope of respective method claims 1-7, thus they are subject to the same rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Bisson et al, US (6,349,092).

Regarding claim 15, Chen discloses that VT (Virtual tributary) traffic is carried within the transport Signals (data frame).see column 3, lines 1-24. but it does not explicitly disclose that the VT is VT-1.5.

However, Bisson discloses that SONET defines synchronous signals known as virtual tributaries (VTs) to transport lower speed signals and that VTs operate at four levels below STS-1. The four defined sizes of VTs are VT-1.5 (1.728 Mbps) for DS1 signals, VT-2 (2.304 Mbps) for CEPT-1 signals, VT-3 (3.456 Mbps) for DS1C signals, and VT-6 (6.912 Mbps) for DS2 signals. Within an STS-1 frame, each VT occupies a portion of the frame. Within the STS-1, different VT groups can be mixed together to form one STS-1 payload. See column 5, lines 3-11.

Therefore, it would have been obvious to an ordinary person of skill in the art, at the time the invention was made to have the VT frames of Chen comprise VT 1.5 level frames so that lower speed signal can be provided.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Ellis et al, US (6,256,292); Chan et al, US (6,301,254); Naohiro,

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US (6,317,414); Shew et al, US (6,530,032); Dantu et al, US (6,532,088); Fang et al, US (6,504,963).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AHMED ELALLAM whose telephone number is (703) 308-6069. The examiner can normally be reached on 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kizou Hassan can be reached on (703) 305-4744. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

AHMED ELALLAM
Examiner
Art Unit 2662
April 16, 2003


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